2431-102
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
F. CESARE	)	
	)	
Serial No. 09/138,926	)	Examiner: S. Nolan
	)	
Filed: August 24, 1998	)	Group Art Unit: 1772
	)	
For: LOW MOLECULAR WEIGHT POLYMERS AND THEIR USE AS DISPERSION AIDS	)	

#15
4-2-02

RESPONSE

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This is in response to the Office Action mailed December 31, 2001. If any fees are occasioned by the filing of this paper, please charge the same to Deposit Account No. 02-2135.

35 U.S.C. §103

Reconsideration and withdrawal of the rejection of claims 10-14 under 35 U.S.C. §103(a) as being unpatentable over the Japanese abstract in view of the alleged admission at page 1, lines 22-25 of the present specification are respectfully requested.

The Japanese abstract appears to be directed to thermoplastic resins containing a blend of high- and low-molecular weight materials. The low molecular weight material appears to be an epoxidised ethylene/alpha-olefin/diene terpolymer. There are several differences between the reference and rejected claims 10-14.

First, the reference lacks disclosure of the presently-claimed amounts of ethylene and alpha-olefin. Each claims of 10-14 recites a minimum ethylene content of 67% *by weight*. In contrast, the Japanese abstract discloses a maximum ethylene content of 75 *mole* %. Given that the molecular weight of ethylene is about 28 g/mole, and the molecular weight of propylene (the lightest alpha-olefin recited in both the present claims and the Japanese abstract) is about 42 g/mole, a copolymer containing 75 mole % ethylene and 25 mole % propylene would contain 66.7% ethylene on a weight basis. That is lower than 67%, and there is no suggestion in the reference to employ a higher amount of ethylene.

Second, the Japanese abstract does not disclose the molecular weight of the terpolymer, nor its physical state (*i.e.*, whether it is a solid at room temperature), both of which are elements of claims 10-14. Indeed, there can be no dispute that no molecular weight information is given:

"The [Japanese] abstract does not teach the molecular weight of the terpolymers" (April 10, 2001, final Action at 5).

As for the alleged admission, the Action seeks to justify reliance on it by stating, without citation of authority, that "the examiner is free to use statements made by applicants as admissions in lieu of references when those statements are material to the patentability of the claims rejected." Applicant respectfully traverses, as the statement at page 1, lines 22-25, is not an admission at all, and is certainly not prior art. Rather, it is a general statement regarding two specific patent documents (U.S. Patent Nos. 5,391,623 and 5,480,941). It is wholly inappropriate to base a rejection on an approximately 21 word general characterization of two references, when the references themselves are available to the Examiner (see IDS filed September 21, 1998), especially when the Examiner has never entered a rejection based on the underlying references. If the references themselves do not support a rejection, then nothing that is said about them after the fact can give them independent relevance or significance.

While it is true that admissions have been used against an applicant, it has generally been in the context of whether certain (usually unpublished) activity is in fact

prior art. See MPEP §2129. That is completely different from the present situation. Here, both of the characterized patents were issued more than one year before the filing date of the present application, and there is no question that they are prior art.

The PTO rules require the Examiner to "cite the best references at his or her command" when making a rejection for obviousness. 37 CFR 1.104(c)(2). There can be no serious dispute that the best references are the patents themselves, and not a brief, *post hoc* characterization of them which was made after the present invention was invented.

In view of the foregoing, it is respectfully submitted that the rejection is defective on its face, and should be withdrawn.

When the actual references underlying the alleged admission are considered for all they fairly teach, it is apparent that they do not support the rejection and the Examiner's reasoning in support thereof, and certainly do not fill in the gaps between claims 10-14 and the Japanese abstract discussed above. Both patents are directed to masterbatch compositions having a high concentration of aramid fibers and no filler material (*e.g.*, USP 5,480,941

at col. 1, line 61-col. 2, line 2). The material with which the aramid fibers are blended is said to include:

> natural rubber and synthetic rubbery compounds. Synthetic rubbery compounds can be any which are dissolved by common organic solvents and can include, among many others, polychloroprene and sulfur-modified chloroprene, hydrocarbon rubbers, butadiene-acrylonitrile copolymers, styrene butadiene rubbers, chlorosulfonated polyethylene, fluoroelastomers, polybutadiene rubbers, polyisoprene rubbers, and the like. [USP 5,480,941 at col. 2, lines 11-19]

There is no teaching or suggestion to blend the aramid fibers with the presently-claimed low molecular weight copolymers or terpolymers. Neither is there such a suggestion or teaching in the Japanese abstract which, as noted above, is silent as to molecular weight. Moreover, even if one were to make the substitution posited by the Examiner, the resulting material would still not meet the claims because the ethylene content would be too low.

Notably, the Action advances no fact, logic or reasoning evident from the references relied upon, as to how those references suggest the ethylene content and molecular weight ranges of the claims 10-14. As shown above, there is none. The combination is defective and no *prima facie* case is made out.

Reconsideration and withdrawal of the new rejection of claims 1-9 and 15-30 under 35 U.S.C. §103(a) as being

unpatentable over Gros, the Japanese abstract, and the alleged admission at page 1, lines 22-25 of the present specification are respectfully requested.

The Japanese abstract and the alleged admission have been discussed previously, and applicant repeats his objection to use of the alleged admission in this rejection. As for Gros, it discloses blends of high and low molecular weight materials which are said to have increased hot and cold processability. The Action relies on Gros as teaching low molecular weight terpolymers. However, Gros does not disclose any low molecular weight polymer having the relative amounts of monomer components recited in any of claims 1-9 and 15-30. The disclosure of molar ratios at column 3, lines 22-36 relied on in the Action appears to be directed to the final low/high molecular weight blend; thus, that is irrelevant to the ethylene content of applicant's low molecular weight material. Moreover, Examples 3 and 4 of Gros appear to be directed to the low molecular weight materials, but in each instance, the polymer contained less ethylene than presently claimed (59 mole% in Example 3; 66 mole% in Example 4). In contrast, claim 1 recites a lower limit of 67 mole%. Moreover, claim 30 specifies an ethylene content

of from about 71% to about 75%. Thus, Gros' low molecular weight material cannot render obvious the present claims.

The Action appears to acknowledge those shortcomings of Gros, and responds by i) relying on a general teaching of "low molecular weights" rubbers in the abstract, and ii) observing that Applicant has failed to show unexpected results from the use of higher ethylene content polymers. However, "low molecular weight" is not a teaching of a "viscosity average molecular weight of from about 4,000 to about 30,000." Moreover, it is wholly improper to require applicant to prove unexpected results when the prior does not suggest the presently claimed range.

Applicants submit that the present application is now in condition for allowance. Reconsideration and favorable action are earnestly requested.

Respectfully submitted,

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